

CLAIMS

1. Antenna (1) characterised in that it includes:
- a first (2) and a second (3) linear sub-antenna:
    - 5       - each having a plurality of sensors (21-2M, 31-3N) arranged so as to form first and second line portions, respectively, with each sensor generating a basic signal ( $S_i'$ ,  $G_j'$ );
    - 10       - wherein the angle between the respective directional vectors of the first and second tangents to the midpoint respectively of the first and second line portions is between  $30^\circ$  and  $150^\circ$ ;
  - an antenna processing device (4, 5) forming a
    - 15       plurality of combined signals ( $V_{Si}$ ,  $V_{Gj}$ ) for each line portion, which signal is a combination of basic signals of the sensors of this line portion;
    - a signal processing device (6, 7) generating combined signals ( $T_{Si}$ ,  $T_{Gj}$ ) useful for filtering
    - 20       the noise of the combined signals coming from each line portion;
    - a device (8) for calculating the correlation coefficients ( $[C_{ij}]$ ) between the useful combined

signals of the first line portion and the useful combined signals of the second line portion;

- a device (8) generating a detection signal ( $[R_{1j}]$ ) when a correlation coefficient exceeds a predetermined threshold.

2. Antenna according to claim 1, characterised in that it also includes a target detection device, comparing each calculated correlation coefficient with a predefined associated threshold, detecting and locating a target when a correlation coefficient exceeds the associated threshold.

3. Antenna according to claim 2, characterised in that it includes a processing device (9) for processing the detection signal and the correlation coefficients generating information concerning the target detected.

4. Antenna according to claim 3, characterised in that the information generated includes the distance, the elevation angle, the bearing and the speed of the target.

5. Antenna according to claim 3 or 4, characterised in that it includes a device (10) displaying the information generated.

6. Antenna according to any one of the previous claims, characterised in that each sensor includes a plurality of elementary sensors selected from the group consisting of radar, radioelectric and electromagnetic sensors, hydrophones, transducers, microphones, ultrasound sensors, accelerometers, and optical and infrared sensors.

7. Antenna according to claim 6, characterised in that:

- the elementary sensors are transmissive;
- the data processing device processes the combined signals according to the signal transmitted by each sensor, which processing includes, for example, a pulse compression.

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8. Antenna according to claim 6, characterised in that it also includes a transmitter, wherein the data processing device processes the combined signals according to the signal transmitted by the transmitter,  
10 which processing includes, for example, a pulse compression.

9. Antenna according to any one of the previous claims, characterised in that the first and second line portions are curves without an inflection point.

15 10. Antenna according to any one of the previous claims, characterised in that the first and second line portions are straight and oriented respectively in elevation angle and bearing.

11. Antenna according to claim 10, characterised in  
20 that the straight line portions are not parallel.